

SCHOFIELD BARRACKS MILITARY RESERVATION,
ORDNANCE STOREHOUSE BUILDING 2105
South of intersection of Kolekole Avenue and Cadet Sheridan Road
Wahiawa Vicinity
Honolulu County
Hawaii

HABS No. HI-544-D

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
U.S. Department of the Interior
National Park Service
Oakland, California

HISTORIC AMERICAN BUILDINGS SURVEY

SCHOFIELD BARRACKS MILITARY RESERVATION, ORDNANCE STOREHOUSE BUILDING 2105

HABS No. HI-544-D

Location: Wahiawa vicinity
City and County of Honolulu, Hawaii

South of intersection of Kolekole Avenue and Cadet Sheridan Road.

USGS 7.5 minute series topographic map, Schofield Barracks, HI, 1998.
Universal Transverse Mercator (UTM) coordinates 04.597180.2376310

Present Owner: United States Army

Present Occupant: United States Army

Present Use: 25th Infantry Division Band

Significance: Building 2105 is significant under National Register Criterion A for its association with the early development of Schofield Barracks in the post-World War I era. Directly following World War I, the United States Army had large amounts of surplus ordnance in Army stocks that were leftover from the war. This building is part of a group of nine that were built ca. 1922 to serve as an ordnance storehouse area for the post, containing ammunition for the field guns and howitzers used by the artillery units at Schofield. Building 2105 is also significant under Criterion C as an example of an early ordnance storage facility: the above ground ordnance storehouse. This design was used across the United States for the storage of ordnance until the well-known 1926 Lake Denmark Naval Ammunition Depot explosion. This catastrophic event spurred the development of new safety guidelines and design parameters, and rendered the above ground ordnance storehouse design obsolete. (Since then, the preferred design is an earth covered igloo which is more resistant to accidental detonation.)

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Date: April 2010

PART I. DESCRIPTION

Building 2105 is a single story storehouse building with a rectangular footprint measuring 96'-9" x 52'-4". In addition to the footprint area covered by the building are 6'-10" wide concrete loading platforms along the entire length of each long side. The building is constructed of hollow terra cotta tile within a concrete frame. It is covered with a cement plaster coating and a painted finish. It has a metal truss-supported gable roof covered in corrugated metal with wide overhanging eaves. The building rests on a board-formed concrete wall foundation and it has a 6" thick concrete floor slab. Along the short ends of the building, the top of the foundation forms a water table about 4" wide.

The building's foundation elevates the floor slab and loading platforms above grade. The loading platform at the northwest side of the building is elevated about 2'-0" and was served by a railroad spur. The loading platform on the opposite (southeast) side of Building 2105 was designed to serve trucks and is elevated about 3'-2" above grade. Both loading platforms are supported at their outer edges by 1'-4" square concrete posts that are at 8'-0" spacing, on center. Each end of the truck (southeast side) loading platform has cast concrete stairs up from grade. At the northeast end of the truck loading platform the stairs are covered by a wood ramp about 20' long has been built to provide vehicle access from grade to the platform. The upper end of the ramp rests atop the treads of the stairs.

The long sides of the building are divided into six bays by plain pilasters (with no bases or capitals) that are typically spaced at 15'-6" on center. The pilasters at the corners of the building are each 3'-0" wide and the remaining five pilasters along each wall are 2'-0" wide. All pilasters project about 4" from the wall. The first, third, fourth, and sixth bays (for this report all bays are numbered left to right, facing the indicated side of the building) along the long sides each have a single window opening that is 5'-3" wide x 5'-7" high with a sill 8'-0" above the floor. The openings are filled with a twelve-light steel sash window with a six-light hopper section. The short ends of the building (gable ends) are divided into three bays by pilasters. The center bay has a single window opening also measuring 5'-3" wide x 5'-7" high that is filled with a twelve-light steel sash window with a six-light hopper section. The sills of these windows are about 11' above the water table. All windows in the building have wire glass lights and added security screens of expanded metal mesh.

Originally doorway openings measuring 7'-1" wide and 8'-0" high were found at bays two and five on both the long sides of the building. One original-sized opening remains at bay two on the southeast side that has an added roll-up metal door. The doorway opening at bay five on this side has been partially filled and a hinged door has been added. On the northwest long side of Building 2105, a partially filled doorway opening with a hinged door is found at bay two. The original opening at bay five has been completely sealed with a surface that matches the exterior walls.

The roof of Building 2105 is covered with ribbed metal panels on purlins of channel-shape metal beams about 3" high and spaced 2'-4" apart. The eaves have a wide overhang of 4' on all sides of the building. The roof is supported on transverse metal trusses typically spaced 15'-6". Near the midpoint between each truss, the purlins are tied together with short sections of threaded metal rod.

The area around the storehouse is fairly level and open with a mowed lawn and scattered large trees that provide shade. A specimen tree, variety *Capparis mollicella* (Schofield Barracks tree

inventory number 4331) is southwest of the building. Building 2105 lies in the center of the grouping of storehouses. There is a paved parking to the southeast of this building.

The interior of the building has been modified from its original open space. It now is portioned into several different rooms and offices. The interior typically has vinyl floor tiles, gypsum board walls with faux-wood particleboard wainscot, and suspended acoustic tile ceilings. Some rooms have carpeting and wall surfaces covered with textured foam to improve the acoustic properties for musical band practice.

PART II. HISTORICAL CONTEXT

For further historical information on this group of ordnance storehouses see the overview report for Schofield Barracks Ordnance Storehouses, HABS HI-544. For more information and photos on individual ordnance storehouses in this group, see each building's dedicated HABS report:

| | |
|---------------|---------------|
| Building 2101 | HABS HI-544-A |
| Building 2102 | HABS HI-544-B |
| Building 2104 | HABS HI-544-C |
| Building 2105 | HABS HI-544-D |
| Building 2106 | HABS HI-544-E |
| Building 2107 | HABS HI-544-F |
| Building 2108 | HABS HI-544-G |
| Building 2109 | HABS HI-544-H |

Ordnance Storehouses at Schofield Barracks

Building 2105 was built ca. 1922 as one of nine ordnance storehouses at Schofield Barracks.¹ These buildings, which would come to be numbered Building 2101 through Building 2109 were constructed from standardized plans for ordnance storage buildings that were issued by the Quartermaster General prior to 1926.² Sometime between 1955 and 1971, one of the storehouses in this grouping, Building 2103, was removed or demolished.

Another term for an ordnance storehouse of this type is a magazine. The ordnance storehouses originally contained "ammunition for the field guns and the howitzers"³ used by the artillery units at Schofield. In the early 1920s this would have been 75mm and 155mm ammunition for the artillery guns at Schofield Barracks.⁴ The group of storehouses was known as the "ammunition dump" at the time of construction and was exclusively "for the storage of explosives."⁵

Alteration History of Building 2105 and its Various Uses

There was no information located on early alterations to this building. Building 2105 was painted in 1966, and in 1967 \$3,900 was spent to repair doors and windows of the building. In 1968 the building was re-roofed with 22 ga. galvanized corrugated metal, which replaced the

¹ Fourth Construction District, "Schofield Barracks, H.T." map, Honolulu: Fourth Construction District, Nov. 1921.

² U.S. Army Corps of Engineers Seattle District, Context Study of the United States Quartermaster General Standardized Plans, 1866-1942, Aberdeen Proving Ground, MD, 1997, 178-181.

³ U.S. Congress, *War Dept. Appropriations Bill, 1923, Hrgs before the Subcommittee of the Com. on Appropriations U.S. Senate, 67th Congress Second Session on H.R. 10871*, Wash. D.C.: U.S. Govt Prntg off., 1922, 587.

⁴ McCollister, Capt. John J. "Motorized Artillery in the Field," *Field Artillery Journal*, Washington D.C: United States Field Artillery Association, May/June 1923, 219.

⁵ NARA, photograph HHD 372 in box RG-165-HDD, March 27, 1922.

original corrugated transite (cement-asbestos) roofing. The existing round roof ventilators were reinstalled on the new roof.⁶ In 1974 \$68,000 was spent to equip Building 2105 for aircraft instrument training. The building was assigned to the 25th Infantry Division Band in 1976 for band training and in 1977 a suspended ceiling of acoustical tiles was installed. That year air conditioning duct work was also done. Large scale metal roll up doors (about 7' x 8') were installed in openings in 1996.⁷ It is currently used by the 25th Infantry Division Band.

PART III. SOURCES OF INFORMATION

A. Architectural Drawings:

Historic drawings dating from 1955 to 1971 produced by the office of the Schofield Barracks Post Engineer for the ordnance storehouses are filed as scanned documents at Schofield Barracks, Directorate of Public Works Archival Database, under the purview of the Environmental Section of the Schofield Department of Public Works.

Drawings numbered:

55004001, 55004402, 55004403 (3 drawings)
57017001, 57017002, 57017003, 57017004 (4 drawings)
57027001, 57027002, 57027003 (3 drawings)
57044001, 57044002, 57044003 (3 drawings)
66034004 (1 drawing)
67019002 (1 drawing)
68040001 (1 drawing)
68062001 (1 drawing)
69062001, 69062002 (2 drawings)
71018001 (1 drawing)

B. Early Views:

Early photos of the ordnance storehouses and Schofield Barracks are available at the National Archives in RG-165-HDD. Schofield Barracks historic photos (including photos of the artillery weapons deployed there) are available at Hawaii State Archives (HSA) file PP54 folders 5 through 11, file PP55 folder 6, and in photo albums 56 and 96. These HSA photos are considered in the public domain.

C. Bibliography:

Alvarez, Patricia M. *A History of Schofield Barracks Military Reservation*. Fort Shafter, HI: U.S Army Engineer Division Pacific Ocean. March 1982.

DeBaker, Cassidy, Carole Denardo, and Windy McElroy. *Historic Architecture Building Survey and Phase I Cultural Resource Survey for Military Housing and Privatization Actions at Schofield Barracks, Island of Oahu, Hawaii*. Honolulu: Tetra Tech Inc. 2007.

Fourth Construction District. "Schofield Barracks, H.T." map. Honolulu: Fourth Construction District, Nov. 1921. In archives collection of Mason Architects, Inc., Honolulu.

⁶ Schofield Barracks, Office of the Post Engineer, drawing 6806 2001, dated August 14, 1968.

⁷ Cassidy DeBaker, Carole Denardo, and Windy McElroy, *Historic Architecture Building Survey and Phase I Cultural Resource Survey for Military Housing and Privatization Actions at Schofield Barracks, Island of Oahu, Hawaii*, Honolulu: Tetra Tech Inc., 2007, 37.

Murphy Joseph, Dwight Packer, Cynthia Savage, Duane E. Peter, and Marsha Prior. *Army Ammunition and Explosives Storage in the United States, 1775-1945*. Fort Worth, TX: U.S. Army Corps of Engineers. 2000.

McCollister, Capt. John J. "Motorized Artillery in the Field," *Field Artillery Journal*. Washington D.C: United States Field Artillery Association. May/June 1923.

National Archives and Records Administration (NARA). Photograph HHD 372 in box RG-165-HDD. March 27, 1922.

Schofield Barracks, Office of the Post Engineer. Historic drawings of ordnance storehouses in Schofield Barracks Directorate of Public Works Archival Database. Various dates.

U.S. Army Corps of Engineers Seattle District. *Context Study of the United States Quartermaster General Standardized Plans, 1866-1942*. Aberdeen Proving Ground, MD. 1997.

U.S. Congress. *War Department Appropriations Bill, 1923, Hearings before the Subcommittee of the Committee on Appropriations U.S. Senate, Sixty-Seventh Congress Second Session on H.R. 10871*. Washington D.C.: U.S. Government Printing Office. 1922.

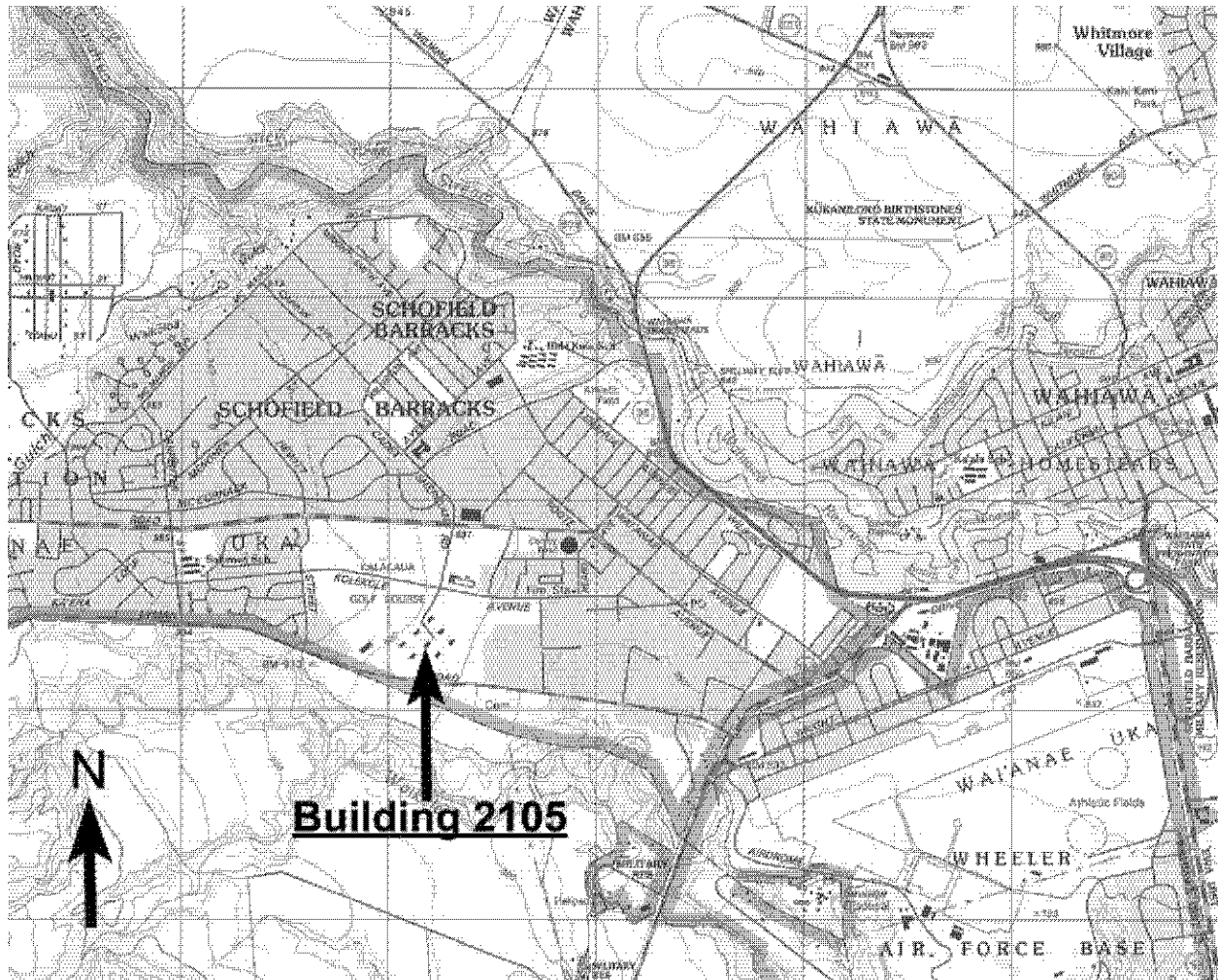
PART IV. PROJECT INFORMATION

This report was produced to provide mitigation for the possible demolition of Buildings 2101, 2102, 2104-2109 at Schofield Barracks Military Reservation. These buildings may be brought into the Army's Residential Communities Initiative (RCI) program which transfers structures and leases land to private development partners in order to improve the Army's family housing inventory.

This report is intended to satisfy requirements under Section 110 of the National Historic Preservation Act of 1966 (NHPA) as amended, to make appropriate records of historic properties that would be substantially altered or demolished as a result of Army action. Mitigation for demolition of extensive alteration under Section 106 sometimes requires HABS reports according to National Park Service (NPS) guidance. Section 101(a) of the NHPA requires that these records be deposited in the Library of Congress for future use and reference. The RCI program could result in demolition of Buildings 2101, 2102, 2104-2109 at Schofield Barracks Military Reservation.

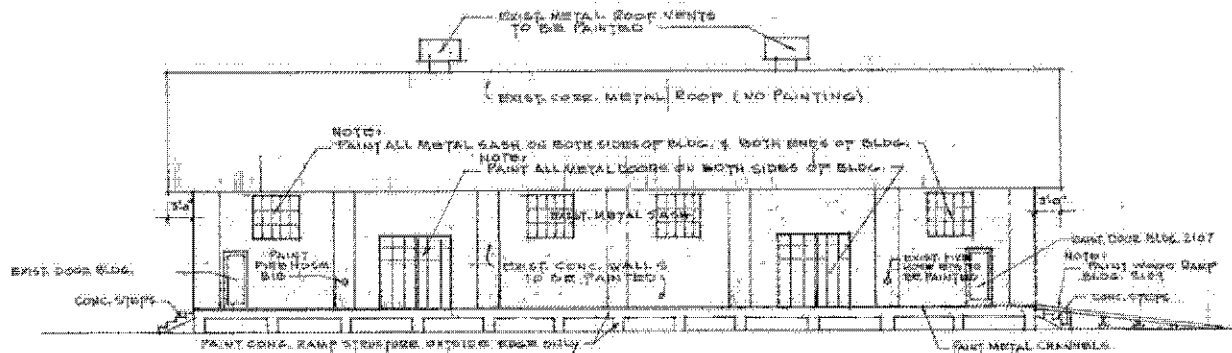
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Location map. North at top.

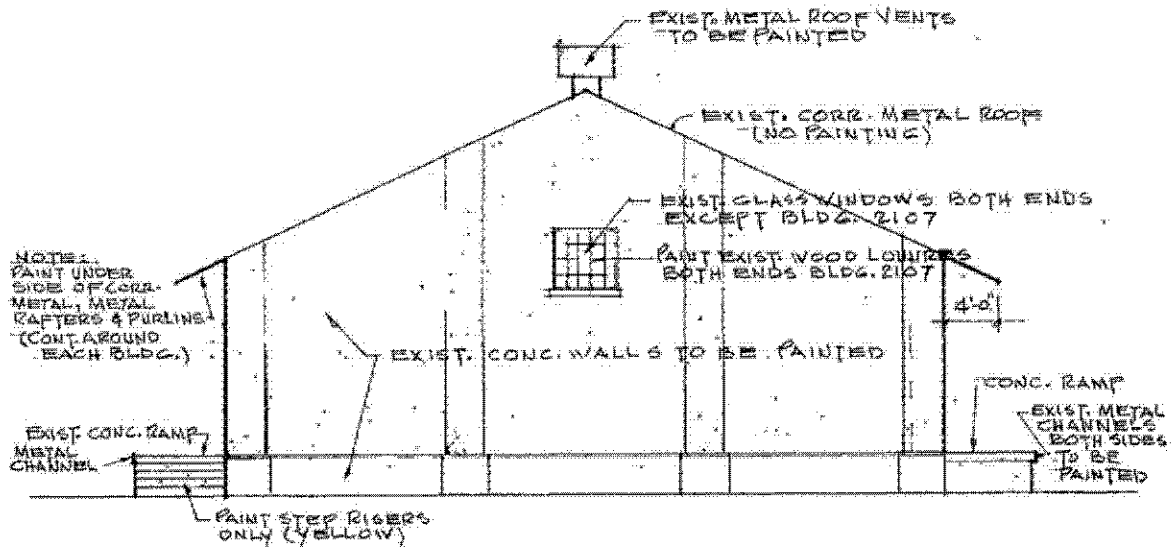


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Portion of drawing dated May 6, 1966 showing typical exterior elevations of the Ordnance Storehouse buildings. This drawing was prepared for the exterior painting of Buildings 2101, 2102, 2104-2109. Schofield Barracks, Office of the Post Engineer, drawing 66034004. No scale.



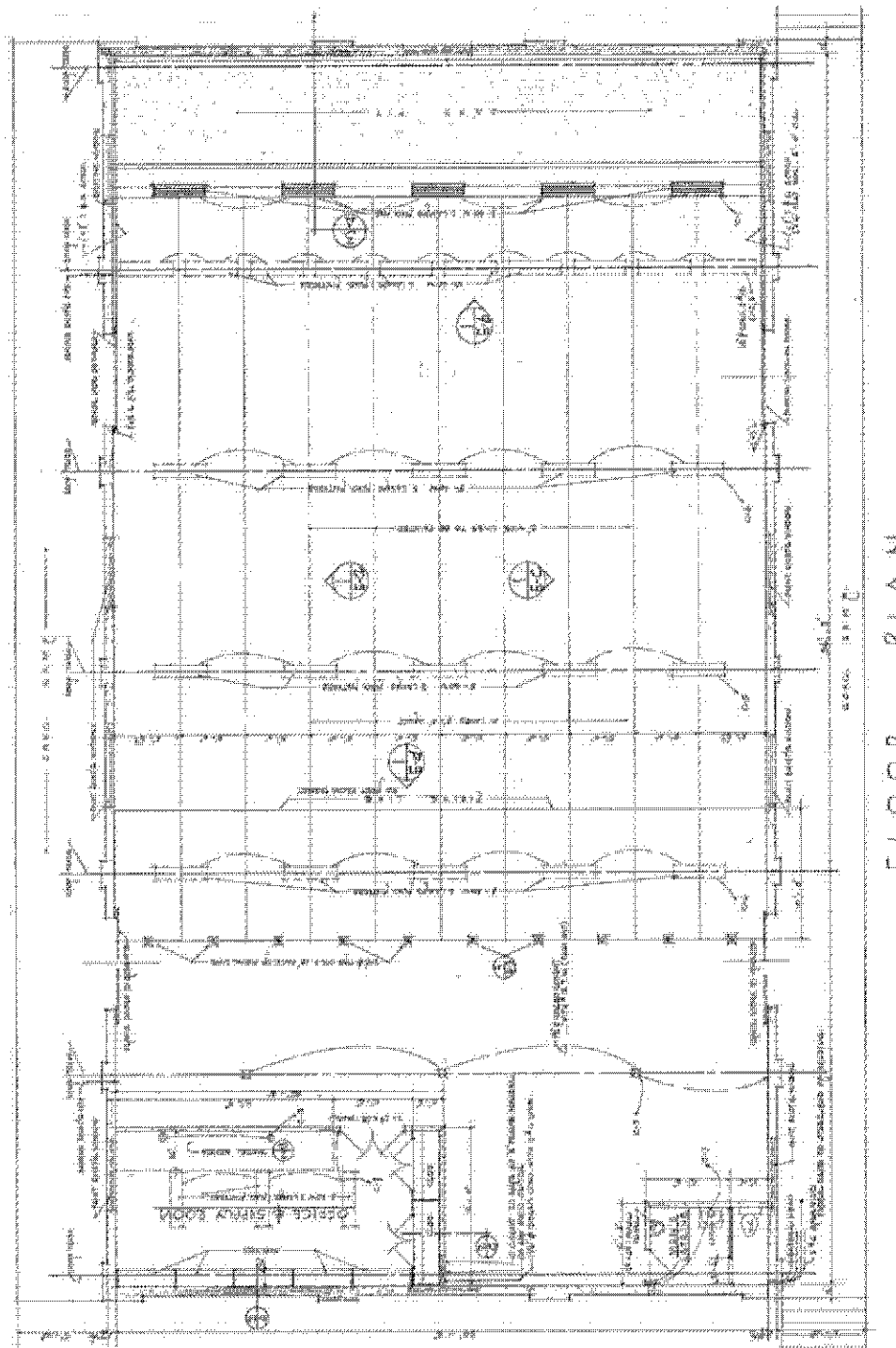
SIDE ELEVATION (CONC. STEP SIDE)



END ELEVATIONS

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Portion of drawing dated January 26, 1955 showing the floor plan of the Ordnance Storehouse buildings. Note the footprint dimensions and location of original window and door openings. This drawing was prepared to convert Building 2104 into a .22 cal. pistol & rifle range. Schofield Barracks, Office of the Post Engineer, drawing 55004001. No scale.



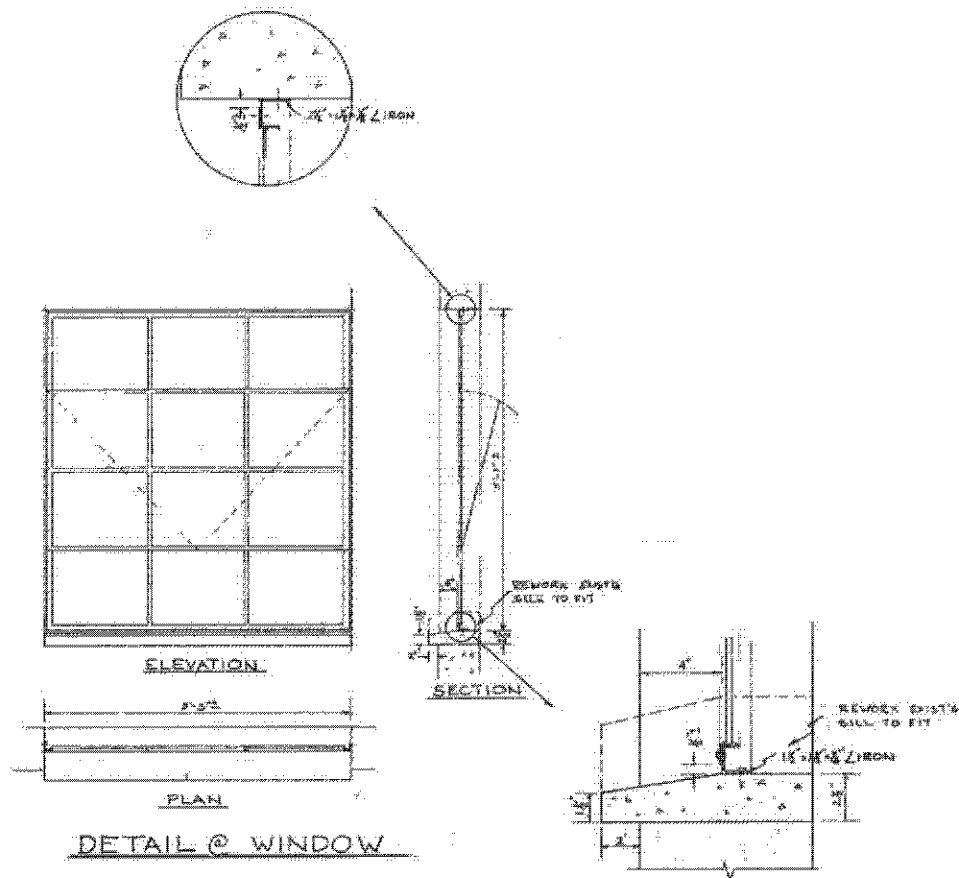
HABS No. HI-544-D (Page 9)

Portion of drawing dated January 26, 1955 showing typical interior configurations of the Ordnance Storehouse buildings. Note the position and configuration of roof trusses. This drawing was prepared to convert Building 2104 into a .22 cal. pistol & rifle range. Schofield Barracks, Office of the Post Engineer, drawing 55004002. No scale.



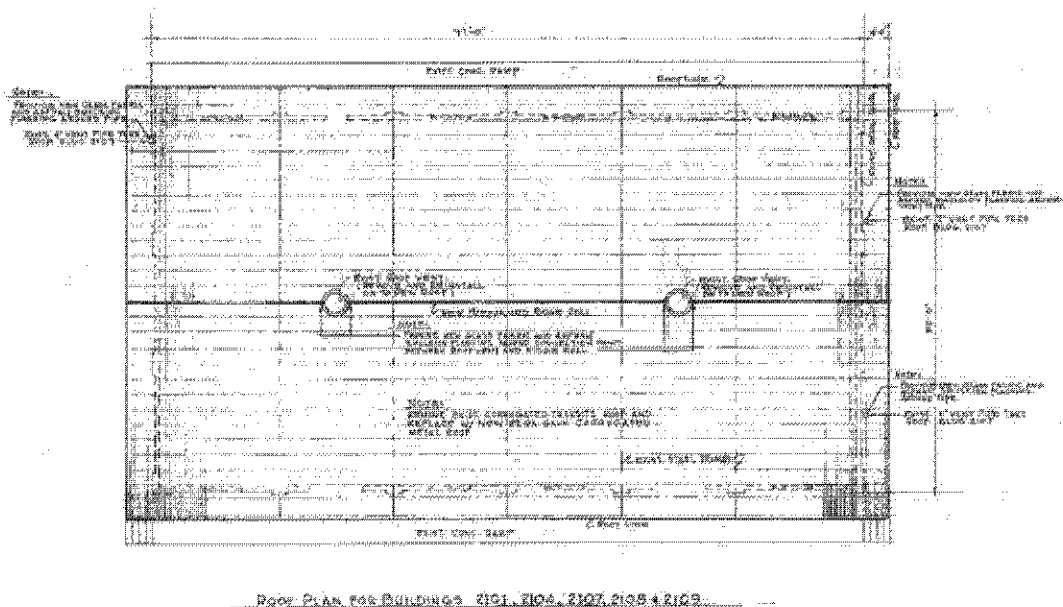
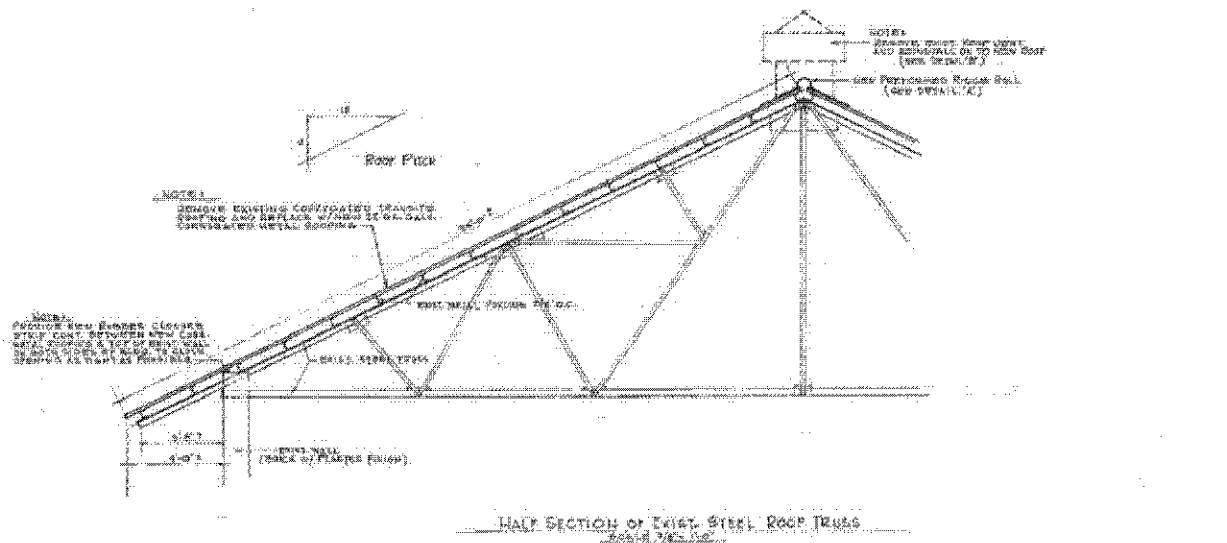
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Portion of drawing dated April 10, 1967 showing typical original window construction of the Ordnance Storehouse buildings. This drawing was prepared for various repairs and alterations at Buildings 2101, 2102, 2104-2109. Schofield Barracks, Office of the Post Engineer, drawing 67019002. No scale.

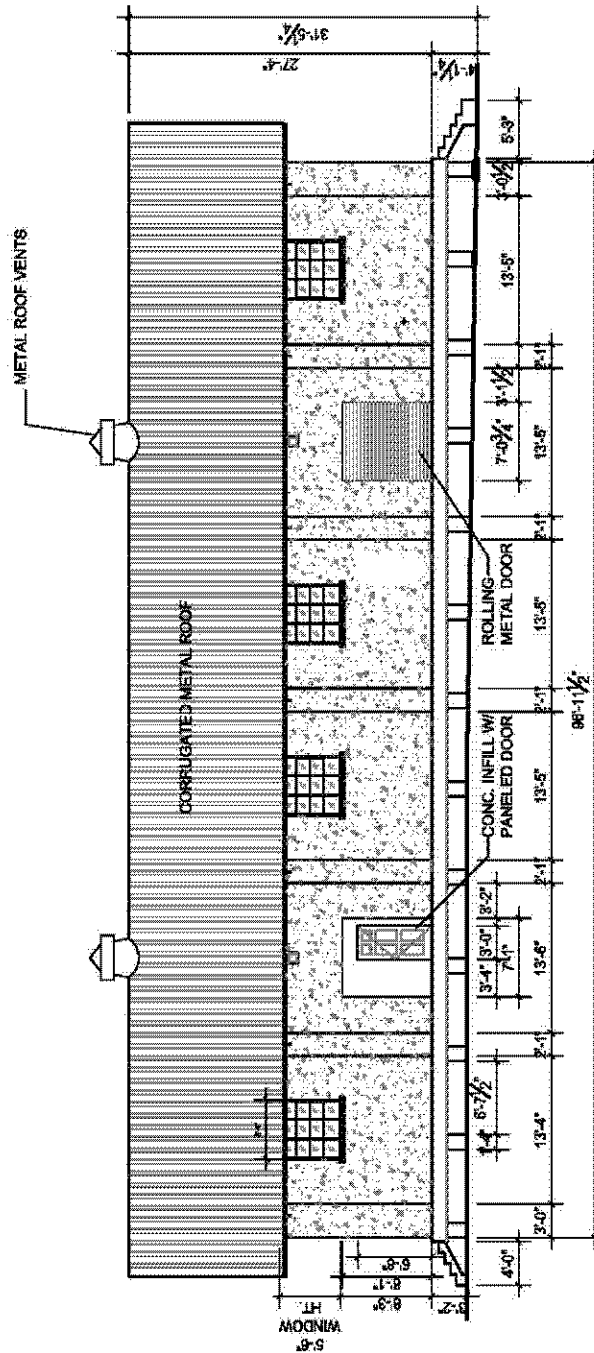


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Portion of drawing dated May 6, 1968 showing roof details of the Ordnance Storehouse buildings. Note the roof truss configuration. This drawing was prepared for the re-roofing of Buildings 2101, 2104, 2107, 2108, and 2109. Schofield Barracks, Office of the Post Engineer, drawing 68040001. No scale.

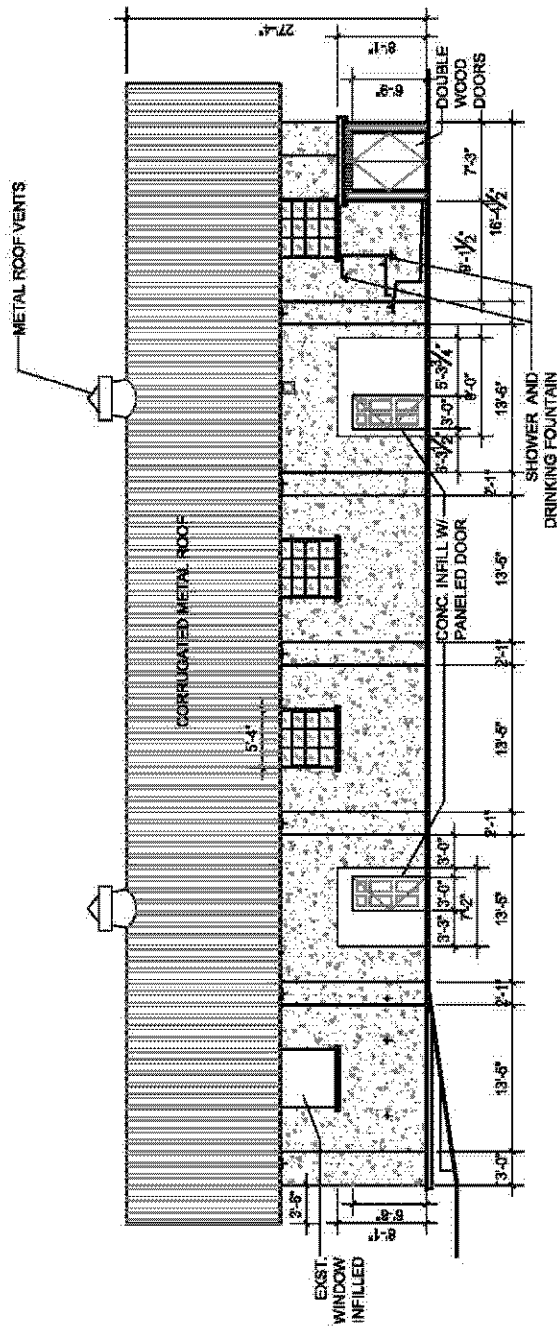


Drawing of ordnance storehouse building dated June 28, 2010 showing the exterior southeast elevation, typical of ordnance storehouse buildings. Note that some of the original large door openings are now in-filled but the location of original window and door openings are evident. These drawings were prepared by Mason Architects. Not to scale.



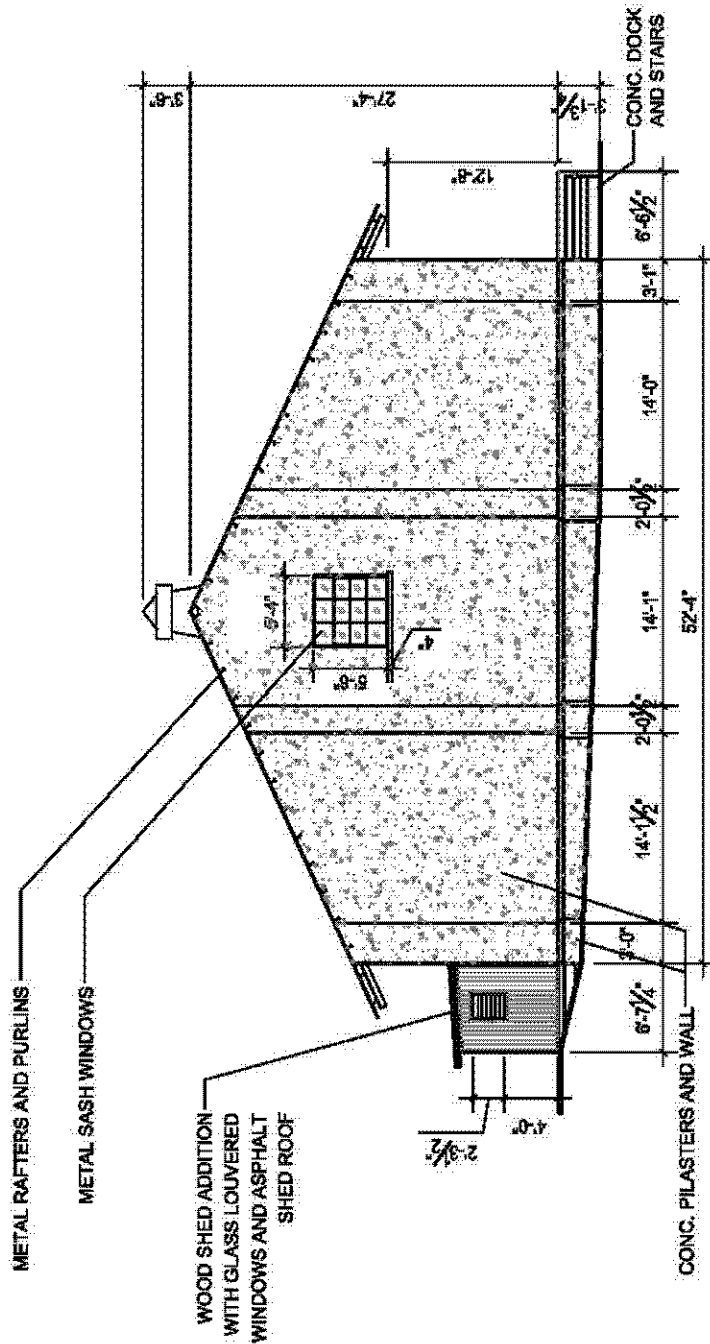
SOUTHEAST ELEVATION

Drawing of ordnance storehouse building dated June 28, 2010 showing the exterior northwest elevation, typical of ordnance storehouse buildings. Note that some of the original large door openings are now in-filled but the location of original window and door openings are evident. These drawings were prepared by Mason Architects. Not to scale.



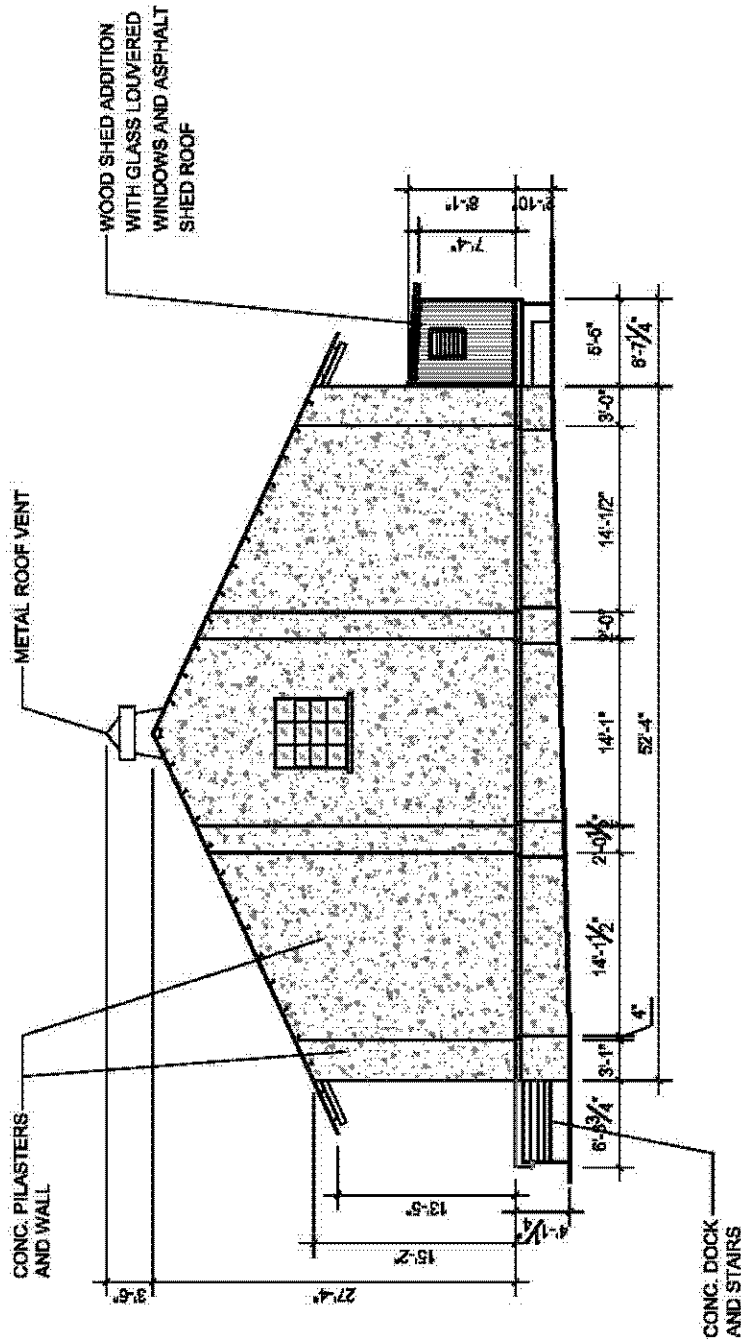
NORTHWEST ELEVATION

Drawing of ordnance storehouse building dated June 28, 2010 showing the exterior southwest elevation, typical of ordnance storehouse buildings. Note that some of the original large door openings are now in-filled but the location of original window and door openings are evident. These drawings were prepared by Mason Architects. Not to scale.



SOUTHWEST ELEVATION

Drawing of ordnance storehouse building dated June 28, 2010 showing the exterior northeast elevation, typical of ordnance storehouse buildings. Note that some of the original large door openings are now in-filled but the location of original window and door openings are evident. These drawings were prepared by Mason Architects. Not to scale.



NORTHEAST ELEVATION

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Drawing of ordnance storehouse building dated June 28, 2010 showing the exterior roof plan, typical of ordnance storehouse buildings. Note that some of the original large door openings are now in-filled but the location of original window and door openings are evident. These drawings were prepared by Mason Architects. Not to scale.

